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MARKETING FARM TIMBER
IN
MONROE COUNTY, GEORGIA

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FOREWORD

This bulletin presents the results of a localized investigation conducted as part of a regional study under Title II, Section 203, of the Research and Marketing Act. It is, in a sense, a progress report covering one phase of a broad field of research dealing with the markets and prices for farm forest products.

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MARKETING FARM TIMBER IN MONROE COUNTY, GEORGIA

INTRODUCTION

Since the early 1930's, the problems of farm management have received a great deal of attention from agronomists, soil scientists, engineers, and other specialists. As a consequence, long-established methods of planting and cultivating have been revised in the interests of soil conservation, and one-crop farming is being abandoned in favor of a diversity of crops.

No comparable progress has been made on the more purely economic problems of efficiently marketing farm products. However, the need for scientific study of the subject was recognized by the Congress in the Research and Marketing Act of 1946, which authorized research to determine the best and most efficient methods of "processing, preparation for market, packaging, handling, transporting, storing, distributing, and marketing agricultural products." In the Southeast, farm woodland products are among those selected for study.

The need for farm timber marketing research in this region is particularly pressing. More than 65 percent of the 895,000 farms in the five states of Florida, Georgia, North Carolina, South Carolina, and Virginia have woodland. In the aggregate, it amounts to 37,355,000 acres, or approximately 42 percent of the total forest land in the region, and accounts for an even larger proportion of the output of forest products. The lumber industry, which operates nearly 13,000 sawmills and is the largest consumer of farm timber, is becoming increasingly dependent on farms for its supply. The same is true of other industries such as veneer, and the rapid development of kraft paper manufacture has further expanded the markets for farm timber. As a result, timber must be considered an important farm crop. Yet, most sales are negotiated individually without the benefit of an organized market or an established price for the commodity sold. Since the average farmer sells forest products too infrequently to become an experienced trader, his transactions are not as profitable as they could and should be.

In undertaking farm timber marketing studies, the first step was to learn as much as possible about how farm timber is sold and to find out what factors tend to limit the farmers' returns from their timber. At the start, it was apparent that we had only the most general conception of the problems of marketing farm timber. It was also apparent that the methods of selling farm timber and the problems of selling it varied from place to place, just as the kinds of products derived from farm timber varied. What was needed was a detailed and localized investigation of current marketing procedures and problems.

Monroe County, Georgia, was the area selected for this investigation. It contains 399 square miles and lies in the southern part of the

Georgia piedmont near the geographical center of the State. Forsyth, the county seat, is about 70 miles from Atlanta and 20 miles from Macon on a line joining the two cities. Monroe County was chosen primarily because the timber, the prevailing methods of selling timber, and the products produced from timber were judged typical of a broad surrounding area--the so-called concentration yard belt. This belt, extending through the piedmont from Virginia to Mississippi, is characterized by thousands of small portable sawmills cutting low-grade pine construction lumber. The lumber is trucked to centrally-located planing mills or concentration yards where it is sorted, dressed, and otherwise prepared for market. There are four of these yards in Monroe County and several more close to its borders in adjacent counties.

Another reason for selecting Monroe County was the fact that the 1947 Census of Lumber Production reported 24 sawmills in operation. A large number of active mills indicated a correspondingly large volume of saw-timber sales to study. It was also known that at least three paper companies drew a portion of their 1947 wood requirements from the county. This seemed to assure the needed volume of pulpwood sales. Pine lumber and pulpwood are the chief forest products of the concentration yard belt.

FOREST PRODUCTS AND MARKETS

Wood holds an important place in the economy of Monroe County. Lumber production in 1947 was nearly 19,000,000 board feet and over 16,000 cords of pulpwood were shipped, not to mention such products as veneer logs and stave and handle bolts. Valuing the lumber conservatively at \$40 per thousand board feet and the pulpwood at \$12 per cord gives a total value of \$950,000. This is more than the value of all manufactured items other than lumber combined; roughly it equals the value of crops, livestock, and dairy products sold; it approaches the dollar volume of retail sales. Farm woodlands are the chief source of the raw material which makes this production possible. During 1947, farmers made 82 sales of forest products totaling nearly \$107,000. Included in the sales were 80 percent of the saw timber, nearly 50 percent of the veneer timber, and practically all the pulpwood timber sold that year.

The timber was sold in three ways: (1) as land and timber, (2) as logs or bolts, and (3) as stumpage. Sales of land and timber (1) were made chiefly to paper companies acquiring land for timber-growing purposes and to lumber companies who usually removed the merchantable saw timber and pulpwood and then resold the land to the paper companies. Since these land sales had little connection with the marketing of farm timber, they were not studied, and no information was obtained as to the amount of wood reaching the market from these sources. Of the second method, only two examples were found. These were both sales of pulpwood stacked in pens and sold for \$1.05 per pen. Most important and of greatest volume were the sales of stumpage.

Volume and Value of Stumpage Sold

All together, there were 104 sales of standing timber in 1947. This includes sales by other timber owners, as well as those by farmers. Rather complete information was obtained on 99 of these by interviewing the sellers and buyers. Seventy-nine were of farm timber and 20 of timber held by timber dealers, banks, a power company, and other non-farm owners. The total price received by the 99 sellers was \$129,000 with over \$103,000 going to farm owners. By far the largest portion of the money was for saw timber, but pulpwood was the second most valuable farm timber product.

To avoid confusion, it should be pointed out that the amount of stumpage purchased in 1947 need not, and does not, equal the amount of wood cut in 1947. Part of the lumber, pulpwood, and other products cut in the spring of 1947 came from timber leases acquired in 1946 or earlier, part came from company-owned lands, and part came from tracts involving both land and timber. Unpredictable business trends also influenced stumpage purchases in 1947, for many operators were reluctant to purchase much timber ahead of their immediate needs.

Table 1.--Summary of stumpage sales, by product and class of seller^{1/}

Product	Farmers		Timber dealers and others		Farm stumpage Percent
	Sales	Volume	Sales	Volume	
	Number	M bd.ft.	Number	M bd.ft.	
Saw timber	55	2/9,015	13	2/2,209	80
Veneer timber	4	3/ 46	3	3/ 49	48
Cooperage, handle, and ski timber	1	3/ 4	2	3/ 13	24
	<u>Number</u>	<u>Cords</u>	<u>Number</u>	<u>Cords</u>	<u>Percent</u>
Pulpwood	19	7,340	1	145	98
	<u>Number</u>	<u>Pieces</u>	<u>Number</u>	<u>Pieces</u>	<u>Percent</u>
Piling	0	0	1	22	0

^{1/} Excludes sales of land and timber, also four sales of farm stumpage for which data are lacking.

^{2/} M board feet of lumber sawed.

^{3/} M board feet, Doyle scale, of logs cut.

Location and Types of Stumpage Sales

Figure 1 shows that sales of standing timber were well distributed over the county. It also shows that sales by the boundary for a lump sum were more common than sales by the thousand board feet or by the cord. However, there were a number of examples of the latter type sale, most of them in the northern half of the County.

Table 2.--Total price paid for stumpage by product and class of seller.

Product	: : Farmers :	: Timber : dealers and : others	: : Total :	: Farm : stumpage
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
Saw timber	90,600	22,800	113,400	80
Veneer timber	500	900	1,400	36
Cooperage, handle, and ski timber	100	1,200	1,300	8
Pulpwood	12,300	300	12,600	98
Piling	0	100	100	0
Total	103,500	25,300	128,800	80

The Lumber Industry as a Market for Farm Timber

The largest buyer of farm timber was the lumber industry, which is dominated by 11 pine concentration yards. Four of these yards are located within the county and seven in neighboring counties. They customarily receive their lumber mill run, plane it, and roughly grade it into two classes, "roofers" and "roofer-rejects." The rejects, which comprise not over 10 percent of the total volume, are sold locally, while the roofers are shipped to customers throughout the eastern United States. A high proportion of the shipments are to the accounts of wholesalers in the Northeast through such railroad diversion points as Salisbury, Maryland, and Delmar, Delaware (See Table 3).

In the building trades, the term "roofers" usually denotes the low-grade boards which are laid on rafters and to which the shingles or other roofing material are nailed. In Monroe County, it is loosely applied to the full range of grades and sizes produced locally from pine.

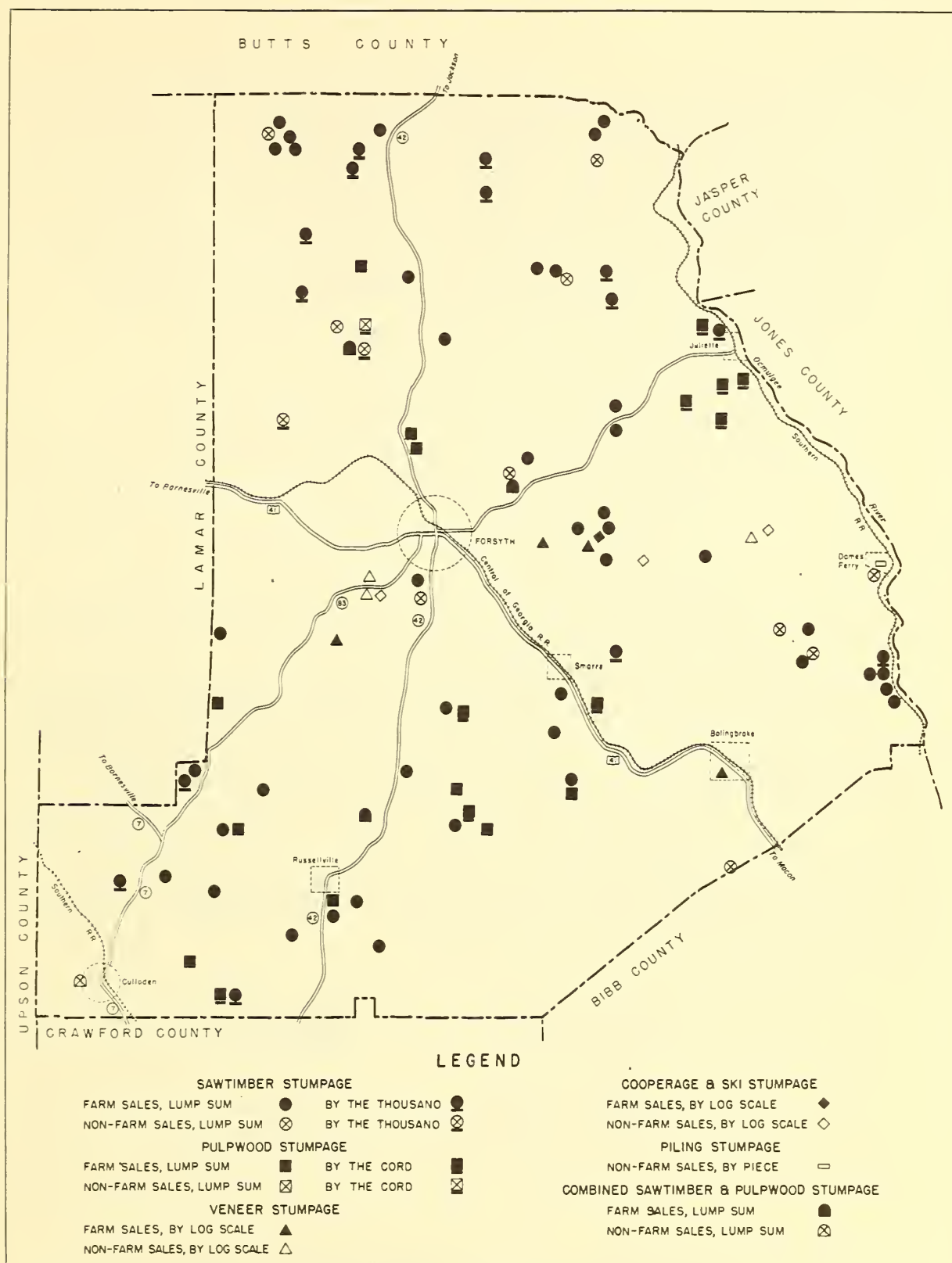


Figure 1. - Timber Sales in Monroe County, Georgia, 1947

Table 3.--Distribution of shipments from selected concentration yards obtaining lumber in Monroe County

Concentration yard	:Delaware : : and : :Maryland :	Penn. : N. Y. : N. J. :	New : England :	Ohio : Ill. :	Ky. : Va. :	Florida
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
A	90					10
B	85					15
C				90	10	
D	30	70				
E		70	5	25		
F	40	45	5	5		5

There are also two box and crate plants receiving lumber from the county. Both these concerns purchase pine stumpage and have it sawed by contract mills. Shipments of boxes and crates are particularly heavy to farm machinery manufacturers in Ohio and Illinois, but shipments are also made to North Carolina, Kentucky, Indiana, and the New York area.

Since the yards and box plants have little use for other species, 90 percent of the lumber produced is pine. Most of the remainder is yellow-poplar. Production totaled 18,868,000 board feet in 1947 and there were 24 portable sawmills in operation. The distribution of these mills by production classes was as follows:

<u>1947 Production</u> <u>M board feet</u>	<u>Number of</u> <u>sawmills</u>
50 - 499	7
500 - 999	10
1,000 - 2,999	<u>7</u>
Total	24

Of the 24 operators, 13 sawed under contract to yards and box plants and 11 were independent. The contract sawyers' responsibility ordinarily ended when the lumber was stacked at the mill site, although a few contracted to haul it. Usually, the independent operators also

sold their lumber stacked in the woods to buyers for the yards or larger lumber companies, but they did not always dispose of their entire cut on a mill-run basis. The small amount of high-grade pine lumber was sometimes sorted out and sold to millwork plants or to wholesale or retail lumber yards. A small amount of oak was also sawed into bridge timbers and heavy sills. This was sold locally. However, when hardwoods other than yellow-poplar were cut, the lumber was usually sold to a nearby furniture factory.

The Paper Industry as a Market for Farm Timber

The second largest market for farm timber was the kraft paper industry. During 1947, 16,200 cords of pulpwood were produced, of which less than 0.5 percent was hardwoods. It was shipped to pulp mills at Charleston and Georgetown, South Carolina; Roanoke Rapids, North Carolina; Savannah, Georgia; and Panama City, Florida. In 1948, two new mills at Macon also began drawing wood from the County.

Pulpwood procurement is accomplished through a system of company-sponsored dealers who, in turn, sponsor producers and, in some cases, sub-producers. Each dealer for a given company is ordinarily responsible for procurement either in a group of counties or in territory tributary to certain railroads. The producers, on the other hand, operate in not more than one or two counties and are directly concerned with producing and shipping the wood.

During 1947, there were four producers and two sub-producers operating in Monroe County. Their purchases of farm timber amounted to 7,300 cords, which was cut from 2,100 acres of farm woodlands.

The Veneer Industry as a Market for Farm Timber

There is also a good market for veneer timber and bolts with two package veneer plants and two commercial veneer plants drawing from the County. The volume of timber suitable for veneering is not great, however, and only 250,000 board feet were cut in 1947. These were produced by two loggers, neither of whom is a full-time operator. Their usual procedure was to purchase the scattered trees of veneer-quality yellow-poplar, sweetgum, maple, sycamore, and blackgum from concentration yard or sawmill operators who had acquired tracts of pine and mixed hardwoods. Thus, they seldom dealt directly with farmers, even though much of their cutting was in farm woods.

Other Markets

The two veneer loggers also cut about 40,000 board feet of white oak stave bolts, which were shipped to a stave mill at Macon. The proprietor of this mill later bought 55,000 board feet of hickory timber, which he logged and sold to be cut into ski blanks for export to Europe. There was also a sale of 5,000 board feet of ash handle bolts to a Macon handle plant.

The only other timber product sold in 1947 was foundation piling. Twenty-two pine trees were purchased and cut by a local logger for use in power plant construction. A treating plant at Macon offers another market for pine poles and piling, but the timber in Monroe County, as in much of the southern piedmont, is generally too rough and limby for this purpose.

MARKETING OF FARM SAW TIMBER

It has been pointed out that farm forest products in Monroe County are sold chiefly as stumpage, with saw timber the major product. The following discussion summarizes the 1947 farm saw timber transactions and analyzes the most important factors affecting the prices received.

Transactions in 1947

Fifty-three of the 79 farm sales of stumpage were of saw timber alone. White resident farmers made more than two-thirds of these sales, but colored farmers were well represented, as well as local professional men who owned farms, non-resident farm owners, and heirs to farm properties. The total acreage from which timber was sold was roughly 6,600 acres, or 8 percent of the farm woodland area as reported by the 1944 Census of Agriculture. Sales by resident farmers, both white and colored, averaged less than 100 acres in size. In contrast to these small sales, the local business man and non-resident farmers sold about 250 acres of timber at a time, while the heirs to farms sold about 500 acres.

The total volume of sales amounted to 8.9 million board feet, nearly 60 percent sold by white resident farmers and nearly 20 percent by heirs to farms. Resident farmers' sales averaged 137,000 feet per sale, sales by non-resident farm owners 183,000 feet, and sales by heirs 568,000 feet.

The average price received for saw-timber stumpage was \$10.10 per thousand board feet. There was considerable variation among classes of sellers, the colored farmers averaging only \$8.40 compared to a high of \$11.60 received by the heirs to farm properties. The colored farmers also sold the smallest area and volume per sale and the heirs the largest. The prices per thousand board feet received by the different classes of

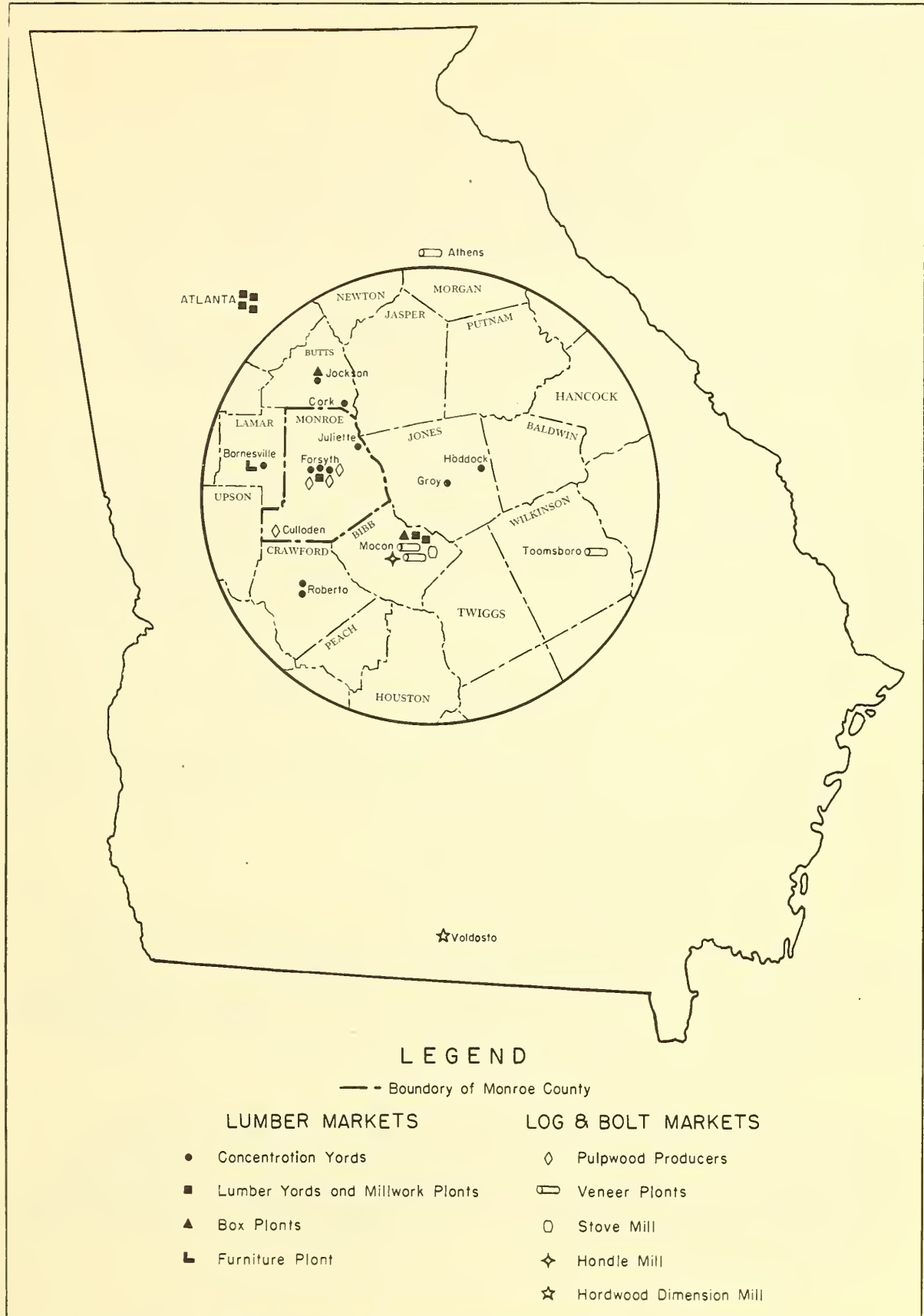


Figure 2. - Markets for lumber, logs, and bolts from Monroe County, 1947

farm owners were as follows:

Colored farmers	\$ 8.40
Local business men owning farms	\$ 8.60
White farmers	\$ 9.90
Non-resident farm owners	\$10.80
Heirs to farm estates	\$11.60

Two thirds of the sales were on a lump-sum basis but, because they averaged larger in size than other sales, they accounted for 85 percent of the saw timber sold. The rest of the sales were on a lumber-tally basis. There was little difference in the average price received.

Written contracts governed nearly 60 percent of the sales and 75 percent of the stumpage sold. When the seller required a written contract, as he did in 42 percent of the sales thus covered, he received \$11.40 per thousand. When it was the buyer who specified a written contract, the seller received \$9.44. The average price received from sales under verbal agreements was only \$8.70 per thousand board feet, apparently indicating that informal sales, even to friends or relatives, are seldom profitable.

Factors Determining Stumpage Prices

The prices received for farm saw timber ranged from \$3.80 to \$16.30 per thousand board feet. What were the factors that determined these prices?

Land Clearing

In four sales, the primary reason for selling was to clear land for pasture, and the price per thousand was secondary to this objective. Consequently, two of the sales brought only \$3.80 and \$4.30 per thousand. The selling prices of the other two were more nearly normal, \$10 and \$13.60. The low prices reflected the sellers' desire to have the land cleared as completely as possible even at some financial sacrifice.

In the succeeding discussion of factors affecting stumpage prices, the four sales for land clearing have been omitted, because the price received had little relation to the criteria affecting the prices of ordinary sales. The conclusions drawn are based, therefore, upon a study of the remaining farm sales of saw-timber stumpage, which totaled 7.9 million board feet and brought \$84,100. The average price received was \$10.60.

Species

Even though 90 percent of the cut was pine, the species composition of the tracts appears to have had a significant effect upon the price paid for stumpage. Pure pine or pine in mixture with oak, hickory, and the less merchantable species commanded a lower price than pine in mixture with yellow-poplar and sweetgum.

Pine	\$10.10 per M bd. ft.
Pine and mixed hardwoods	\$10.50 per M bd. ft.
Pine, yellow-poplar, sweetgum	\$11.60 per M.bd. ft.

There are several reasons why the mixed pine-hardwood stands sold for more. In the first place, the pine growing in these stands was somewhat better quality than the pure old-field pine. Secondly, the sawmill operators in the mixed stands sometimes practiced a limited amount of sorting, selling the poorer quality boards as roofers, the better quality pine to retail yards and millwork plants, and the better quality yellow-poplar and gum to neighboring box plants. In addition, the box plants at Macon and Jackson paid a higher price for stumpage with a good admixture of yellow-poplar and sweetgum. Finally, stands containing yellow-poplar and sweetgum of veneer quality are worth more to a sawmill operator, because he can make a small profit selling the veneer stumpage directly to a bolt producer. The effect of the different methods of disposal of lumber upon the stumpage price paid for stands of various species combinations is as follows:

<u>Disposal</u>	<u>Pine</u>	<u>Pine-mixed hardwoods</u>	<u>Pine, yellow- poplar, sweetgum</u>
Roofers to concentration yards	\$ 9.60	\$10.00	\$11.00
To furniture plants	11.10	8.70	10.00
Roofers and higher grades elsewhere	11.60	--	14.00
Box plants	9.50	13.90	16.20

Size of Timber

In pure pine stands the stumpage price did not consistently increase with an increase in the average diameter of the trees. As expected, the stands composed of small saw-timber trees sold for less, averaging \$9.50 per thousand, than stands ranging in average diameter from 11 through 13 inches d.b.h., which sold for \$11.40. Oddly enough, however, stands averaging over 13 inches returned the owners only \$8.90 per thousand on the average. This can probably be explained by the fact that over half of the volume was sold by a colored widow who received only \$6.00 per thousand for her timber. She knew nothing about timber, had no written contract,

and was chiefly concerned with obtaining enough money to buy an automobile.

In spite of these rather unusual cases, however, there was a trend toward higher stumpage prices as the average tree diameter increased, when both the pine and pine-hardwood stands were considered, as is indicated below:

<u>D.b.h. classes</u>	<u>Dollars per M bd. ft.</u>
8, 9, and 10 inches	\$ 8.90
11, 12, and 13 inches	\$10.60
14, 15, and 16 inches	\$11.60

Quality

No precise measure of timber quality could be made, but the stumpage was classified as fair to good or poor quality, based either upon observation or the buyer's and seller's estimates of the quality. These terms apply to timber occurring in the piedmont. Good pine timber there is not comparable to good quality loblolly or longleaf pine of the Georgia coastal plain.

There was not a wide range in the quality of the timber sold. It was found, however, that more was paid for fair to good timber than for poor, both in the pure pine stands and in those where yellow-poplar, sweetgum, and other hardwoods were in mixture. The average price paid for fair to good stumpage was \$10.80 compared to \$8.40 for the poor, a difference of \$2.40 per thousand board feet.

Size of Tract

The size of the area sold did not appear to have much influence on the price received, although there was some indication that stumpage prices were higher for timber in tracts of less than 50 acres. For instance, good quality timber on these smaller acreages sold for an average of \$12.70, that on areas over 50 acres for \$10.40. However, for all qualities of timber combined, the average price was \$11 on the smaller tracts and \$10.70 on the larger, probably not a significant difference.

Cut per Acre

The highest average price, \$11.30 per thousand feet, was paid for stands providing a cut of over 5,000 feet per acre. Based on the data available, however, it appears that the volume cut per acre had no significant influence on the price paid for stumpage except in the very best

stands. For instance, in all sales where the cut was 1,000 to 2,000 feet per acre the average price paid was \$11.20; where the cut was 2,000 to 3,000 feet the price was only \$9.

Accessibility

In pine stands the relative ease of logging, as influenced by topography, was reflected in the price paid for stumpage. On rough land, the average price was only \$7.60 per thousand, on rolling land \$10.60, and on flat land, where the logging was easiest, \$13.20. This did not hold true for stands where yellow-poplar and sweetgum were mixed with the pine. These species are of the best quality in the rough broken land along the Ocmulgee River and poorest on the flat pine lands of the southwestern part of the county. The higher quality of the timber on the rougher areas apparently offsets increased logging costs, and stumpage brought \$12.10 as compared to \$11.40 on the rolling areas, and \$10.70 on the flat land.

It is common practice to skid logs directly from stump to mill, and the lumber is sold stacked at the mill site. The condition of the roads and the distance from the stacked lumber to the nearest all-weather road do not, therefore, have a direct bearing upon the price the mill operator pays for stumpage. It seems reasonable to assume, however, that the lumber producer will receive less for lumber stacked a long distance from a good highway and that he would take this into consideration when deciding upon the price to pay for stumpage. Analysis of sales indicates this was not always the case, as the difference between the price paid for stumpage located within five miles of an all-weather highway and stumpage located 6 to 11 miles away was only 60 cents per thousand feet.

Seller's Bargaining Position

The farm owners who planned on continuous yields of timber from their woods received more for their stumpage than did those who planned only one liquidation cut. There are doubtless several reasons for this, chief of which would be greater knowledge of timber volume, quality, and value attained through experience on recurring sales. These transactions also afford the owner contact with more stumpage buyers, enabling him to better appraise the available markets for his timber. Apparently, the farmers who plan ahead also manage their financial affairs better. Only 20 percent of the volume sold by owners planning continuous yields was sold because money was needed, whereas over one-half of the volume sold on liquidation sales was for this reason. The owners who had carried their timber harvesting plans to the point of operating on tentative cutting cycles had the best knowledge of timber values, and this is reflected in the price they received.

<u>Seller's plans</u>	<u>Price per M bd. ft.</u>
Liquidate timber	\$ 7.90
Permanent operation, no cutting cycle established	\$10.00
Permanent operation, cutting cycle established	\$11.40

Freedom in deciding when to sell is essential if the farmer is to receive a satisfactory price for his stumpage, since he is at a disadvantage when he is forced to sell his timber for financial or other reasons. In Monroe County, about one-fourth of the saw-timber stumpage was sold because the farmer needed money, indicating that some of these might be forced sales. The average return was \$10 per thousand.

The bulk of the stumpage, nearly 60 percent, was sold because prices were high and it seemed a favorable time to sell. The sellers received an average of \$11 per thousand, or \$1 more than those who needed money. Other "free" sales included the widow who sold timber to buy a car, the man who sold the timber from the farm before he moved, farmers who made partial cuttings to improve their stands, and one farmer who sold timber every year. Only in the first two of these cases was the selling price noticeably lower than the average, and this resulted from lack of knowledge of timber values. In summary, it appears that the seller's bargaining position may be influenced by his reason for selling, but most sales were of the "freewill" type, which allowed the owner opportunity to bargain for the best price.

A farmer's ability to bargain effectively is reduced materially by lack of knowledge of timber volume, quality, and value. Inability to properly estimate timber volume is the greatest weakness. Fully one-half of the sellers admitted they had little idea of the quantity they sold, and it is probable that others were not too well informed. Three-fifths of the sellers were aware of the price being paid for timber in their locality and seemed to have a fair idea of the value of their timber. Two-thirds claimed to have knowledge of the quality of their timber, but their appraisal was undoubtedly based upon current products, i.e., roofers, and did not take into account the possible value of the timber for a higher use. The saying that "knowledge is power" is unquestionably true in the case of farmers selling timber, for those who professed to know volume, quality, and value received an average of \$11.70 per thousand board feet compared to \$8.40 received by the uninformed. If all had been equally competent, the farmers in Monroe County might have obtained about \$24,000 more for their stumpage.

Present facilities of public forestry agencies afford the individual farmer little opportunity to obtain the disinterested advice and assistance he so badly needs. The only source of marking and cruising help in Monroe County is the local District Forester of the Georgia Forest Service. Since he has many other duties, including fire protection,

it is obvious that he can work on only a very small portion of the 12,400 farm woodlands in his District, even with one or two assistants to help him. In 1947, help to the extent of marking 168 thousand board feet, was requested and given on only one of the 49 sales under analysis.

Representatives of the lumber and pulp companies cruised some timber and made the results available to the owners, thus affording them some basis for making an intelligent sale, but only three instances of this kind were encountered. The owners marked the timber to be sold in three additional cases, but no sale was discovered on which the timber was both marked and cruised. The greater return from selling marked or cruised timber is illustrated below:

	<u>Percent of total volume sold</u>	<u>Average price per M bd. ft.</u>
Not marked or cruised	77	\$ 9.70
Marked only	1	\$12.80
Cruised only	22	\$13.50

Heavy cutting and withdrawal of large forested areas to paper company ownership has intensified the shortage of operable saw timber. It would be reasonable to assume, therefore, that there would be intensive competition for every tract of timber, and that a number of bids would be received for each offering. Such was not the case, however. In nearly three-fifths of the sales there was only one bidder. There appear to be two reasons for this. Frequently, a buyer makes an offer to a timber owner who has not previously considered selling his timber and, if the offer seems good, the owner may sell without troubling to invite bids from other buyers. It is also quite common for farm timber owners to sell to a relative in the sawmill business or to a neighboring sawmill operator without looking for better markets.

For the highest return, timber owners should apparently obtain bids from three or more prospective purchasers. The one- and two-bid sales showed little or no difference in price. When three to six bids were obtained, on the other hand, the seller averaged \$2.50 more per thousand.

Buyer's Bargaining Position

The buyers of saw timber are chiefly independent sawmill operators and the operators of concentration yards or box plants who have timber sawed by contract mills. Their bargaining position is influenced by a number of factors such as the product manufactured, competition for timber, the spread between operating costs and selling prices, their knowledge of timber, the location of their mill in relation to the timber, and the buyer's reputation for fair dealing.

Independent operators producing only roofers are limited in their ability to offer better-than-average prices for stumpage, because their lumber brings a rather uniform price at all the markets available to them. Those who produce roofers but also sort out the better boards for sale to millwork plants and retail yards can and do pay more for their timber. These operators are typically more efficient and are rather aggressive in searching for better markets. Buyers of timber for the box plants are in the best position of all, because the higher value of their final product apparently allows them to pay more for stumpage. Concentration yard operators who buy stumpage are in much the same class as the sawmill operators producing only roofers, for most of the yards ship only ungraded roofers to the northern markets.

A growing shortage of timber also works against the stumpage buyer by forcing him to pay a higher price and by making it difficult to plan his operation far ahead. It has been common practice for most independent operators to have several months' to a year's supply of timber under lease, but some report that this has been impossible recently.

No precise information is available on the spread between lumber costs and selling prices, but fragmentary information indicates that some operators may not make enough to cover interest, insurance, depreciation, and taxes.

Knowledge of standing timber volume is more essential to the buyer in Monroe County than knowledge of timber quality, because of the low-grade product manufactured. Very few of the operators make a systematic cruise of a tract before purchase, but depend upon rough estimates based on general observation. Those who have acquired a degree of accuracy through trial and error have a bargaining advantage over their less-practiced competitors. Even they are not always able to bid effectively, however, because their estimates may be too low to interest the sellers.

Mill location in respect to the timber supply is not a very important factor affecting the buyer's bargaining position in Monroe County. This is because the mills are small and portable, and it is common practice to move the mill directly to the timber. Also, the sawmill operators tend to restrict their timber purchases to their own neighborhood where they have an established supply of labor.

One of the most important items affecting the buyer's ability to bargain effectively is his reputation for honesty and fair dealing. It is frequently the deciding factor when a seller chooses between offers. Indeed, the sellers sometimes make small price concessions in order to sell to a reliable operator.

Method of Setting Price

As might be expected, the price paid for stumpage depends to a considerable degree upon how it is established. In Monroe County, the price was set in five ways: (1) by the buyer, (2) by the owner, (3) by compromise between the owner and a single buyer, (4) by acceptance of the highest bid, and (5) by compromise between the owner and the highest of a number of bidders. When the buyers established the price, they were naturally conservative, and the average return to the stumpage owner was low. There was no evidence, however, that the buyers were adhering to a mutually agreed-upon price, since there was a range of \$4 to \$12 per thousand (see below). The seller gained little when he set the price himself, for he often asked less than the timber was worth or the buyer willing to pay. Neither did negotiation between the owner and a single buyer result in a higher price, but when bids were obtained from several operators there was a marked improvement. Highest prices resulted when several bids were obtained, and the owner then negotiated further with the high bidder.

<u>How price is set</u>	<u>Average price per thousand</u>	<u>Range in price</u>
By buyer	\$ 9.60	\$4.00 - \$12.00
By compromise with one buyer	\$ 9.80	\$7.70 - \$12.00
By owner	\$10.30	\$6.30 - \$14.90
By high bid	\$11.20	\$8.80 - \$15.00
By high bid and negotiation	\$12.60	\$8.00 - \$16.30

Method of Paying

Two-thirds of the sales were lump-sum transactions and payment for the rest was by the thousand board feet, lumber tally. There was a slight advantage to the owner in selling for a lump sum; the average price received was \$10.60 compared to \$10.40 on the basis of lumber tally. It is difficult to say with certainty just why lump-sum sales resulted in higher stumpage returns, but the greater number of bids received appears to be an important reason. In over half the lump-sum sales there were two or more bids, but this was true of only one-fourth of the lumber-tally sales. When only one bid was received, there was a small differential favoring lumber-tally.

MARKETING OF OTHER FARM TIMBER

Pulpwood

Transactions in 1947

There were 19 sales of farm pulpwood timber during the year. Nine of these were made primarily to clear land. The other 10 were spread among four buyers (one an independent producer, the other three producers for a single large company) operating in four widely separated sections of Monroe County. Their leases totaled 953 acres, ranging from 3 to 300 acres in size, and approximately 3,060 standard cords of pine pulpwood were cut. The selling price varied from \$1.40 to \$2 per standard cord, averaging \$1.70.

Seven of the sales were by verbal contract with payment by the cord in six of them and by lump-sum payment in the seventh. There were written leases for the other three sales. Payment was by lump-sum in two of these, by the cord in the remaining one. From a comparison of the returns received under various conditions of sale, it appears that the most advantageous way to sell pulpwood is by a written contract with payment by the cord. Returns to farmers under these conditions were \$2 per standard cord. The next best method is by written contract with a lump-sum payment. This resulted in an average return of \$1.90 per standard cord. The third method, and the one most used in Monroe County, is to sell on a verbal contract with payment by the cord. The average return by this method was approximately \$1.80 per standard cord. The least desirable method encountered was selling by lump-sum payment with a verbal contract. The average return here was only \$1.40.

Of the ten sales studied, six were straight sales of pulpwood in which the average selling price was approximately \$1.60 per standard cord. The other farm sales were of small trees and tops left after the saw timber had been harvested. The average selling price was approximately \$1.90 for this group. It was anticipated that straight sales of pulpwood would bring a higher price than the "clean-up" sales after saw-timber logging because of the greater density of the stands and the larger trees to be harvested. The only apparent reason for the opposite effect is the fact that two of the purchases following saw-timber cutting were made by the man who cut the saw timber. By combining the pulpwood cutting with the logging of saw timber, he possibly paid more for the pulpwood than he could have afforded if buying only the pulpwood after the saw-timber logging had been completed by some one else.

Factors Determining Stumpage Prices

Species was not a factor in determining stumpage prices, since only pine was cut for pulpwood. The trees averaged a little over 7 inches in diameter, ranging from 4 to 14 inches. The selling price of pulpwood cut from trees less than 8 inches in diameter was \$1.70 per standard cord; for that cut from trees 8 to 12 inches d.b.h. the price was \$1.85. Very few trees over 12 inches d.b.h. were cut into pulpwood. It appears that size was a factor in determining stumpage prices, for the highest selling price was for pulpwood stands with an average d.b.h. of about 11 inches, the price declining as the average d.b.h. of the stand increased or decreased from this point.

The quality of the timber influenced stumpage prices to the extent of approximately twenty-five cents per cord. Pulpwood cut from "good" quality timber sold for slightly under \$2 per standard cord while the price for pulpwood from "fair" and "poor" timber was just below \$1.75 per standard cord.

The acreage of a lease had no apparent effect on stumpage prices. This was probably due to the prevailing practice of selling pulpwood by the standard cord removed rather than by lump-sum payment for all the pulpwood stumpage on an area.

No measure of the effect of stand density on stumpage prices was possible because nine of the ten sales were from stands of medium density. Contrary to logical expectations, however, the average volume per acre had little effect on the selling price of pulpwood. For instance, five sales with an average cut of three cords or less per acre ranged in price from \$1.50 to \$2. Sales of heavier stands, up to 20 cords per acre, ranged from \$1.40 to \$2 per cord.

Accessibility did not seem to be a factor in determining stumpage prices, as conditions are fairly uniform throughout the county. The majority of sales were made on the rolling topography that characterizes most of the farmland in the county. All rural and logging roads are about equally passable, varying in degree by season of the year. Loading points are plentiful along three rail lines, and no point in the county is over 15 miles by road from a railroad. The average truck haul probably does not exceed 7 miles.

The seller's plan, or lack of one, for managing his timber had slight bearing on stumpage prices. The seven sellers with management plans averaged only five cents more per cord than the three who had no plans. Neither did the farmer's reason for selling his pulpwood stumpage have any apparent effect. And when the seller had his timber cruised, his return was only ten cents a cord higher than when no cruise was made.

Veneer and Cooperage

There were only four sales of farm veneer timber during 1947. Just a little over 46 thousand board feet of pine, yellow-poplar, and sweetgum were cut from a small acreage. The average selling price was \$10 per thousand with no differentiation of species. This timber was sold to independent veneer bolt producers. Payment was on the basis of the log scale of bolts delivered to the veneer plants. No written contract or timber lease was involved.

One transaction also included the sale of nearly 3,500 board feet of white oak bolts for tight cooperage manufacture. The price was \$15 per thousand. Conditions of the veneer sales also applied to the cooperage bolts sold.

No comparisons of these few sales are possible, so the factors determining stumpage prices must remain undiscovered. However, this is not too important, as there is a very small percentage of timber in the county of high enough quality to use for veneer and cooperage. This is unfortunate, in view of the good markets for these products in the vicinity

REACTIONS TO TIMBER TRANSACTIONS

The Buyer's Reaction

In general, the timber buyers were satisfied with the results of their timber transactions. One-third of them admitted that they made particularly good buys on roughly one-fifth of the total number of their farm stumpage purchases. This included all types of stumpage. More than half of those who made good buys believe they should have paid more for some of the farm timber. This indicates that a portion of the farm timber sold in Monroe County brought less than its fair market value.

Only a few buyers claimed to have paid too much for stumpage. Their dissatisfaction resulted from obtaining less than the expected volume from the tracts cut. Due to the increasing scarcity of good timber in the county, it was anticipated that many buyers would complain of high stumpage prices, but this was not the case.

Slightly over half the farm timber transactions were made under a formal written contract. As may be seen from the typical timber lease in the Appendix, there is little reason for buyers to be dissatisfied with purchases made under the conditions specified. The written contracts used in Monroe County may be said to be "all for the buyer." (See Appendix for a contract form designed to protect the seller.) The verbal contracts by which the rest of the sales were made gave equally as much freedom to the buyers. Only one buyer complained of disadvantageous terms of sale. This

was on a sale of marked timber. The buyer maintained that he lost money on the transaction because the marked trees were so scattered that his logging costs were exorbitant.

A few other cases of buyer dissatisfaction were noted, each for a different cause. Most of them were of the kind that are bound to arise in any group of transactions. Examples are: (1) the seller tried to renege on the sale when he received a more attractive offer after he had signed the contract, (2) the seller had previously sold the best trees in the stand, (3) the seller misrepresented the boundaries, so the buyer cut less than he had cruised and paid for, and (4) the seller was so unreasonable in his demands that the buyer abandoned cutting the tract. From the foregoing it is evident that the buyer must carefully check all conditions of the sale, and even then, cannot avoid some disagreements.

The Seller's Reaction

On 70 percent of the sales of farm timber the seller was satisfied with the price received, the terms of sale, and the performance of the operator. This does not mean that all these sellers received highly favorable prices, although they did average \$10.64 per M board feet for saw timber and \$1.76 per standard cord for pulpwood. The percentage of satisfied sellers would have been much lower had they been more familiar with timber markets and the quantity and quality of the timber they sold.

One of the factors that very definitely affects a seller's satisfaction is his primary reason for selling his timber. If he sells of his own free will, simply to make a profitable business transaction, his chances for satisfaction are much better than when he sells because he is in immediate need of cash. In 1947, about 30 percent of the total number of farm timber sales were made primarily to take advantage of what the seller deemed favorable prices. About 85 percent of these transactions left the sellers satisfied. During the same period, 28 percent of the total number of farm timber sales were made because the sellers had immediate need of money, and their timber assets lent themselves readily to conversion to cash. The sellers were satisfied in only 60 percent of the sales of this type. The third most prominent reason given for selling was to clear land for other agricultural uses, and the sellers were satisfied in slightly more than half the cases.

The remaining sales were made for a variety of reasons, such as desire to improve the timber stand, desire to liquidate timber before moving from a farm, desire to obtain cash to spend "before I die," and to salvage dead and dying timber. In three-fourths of these cases the seller was satisfied with the results of the sale.

The reasons why sellers were dissatisfied were various and ranged from petty differences to misinterpretation of contracts. Very often a seller was dissatisfied with the results of a transaction for a very minor reason. At the same time there may have been other and more important

grounds for complaint of which he was unaware because of his inexperience or ignorance of timber marketing practices. For instance, there were indications that the buyers could have afforded to pay more than they did for stumpage, yet only 6 percent of the sellers complained of too low a price. Apparently, many never discovered just how low their final realization was. An example of a common practice will show how this can happen: A farmer agrees to sell his stumpage for a lump sum, this lump sum being computed by multiplying a generally fair price per thousand board feet by the volume of stumpage he thinks he has. For this last figure he either uses his own inexperienced estimate, the figure supplied by a neighbor who is as unqualified as he, or the buyer's cruise which is likely to be conservative. Thus, the farmer sets a price which he believes will give him a fair return. Actually, he may be selling more timber than he believes he has and so realizes a correspondingly lower price per thousand. If he never discovers how much the buyer actually cut, he continues to believe he has made a fair and profitable business transaction. Most of the complaints about low prices occurred in cases where the seller later discovered the buyer cut more than the original estimate.

The sellers had many complaints about the terms of sale incorporated in timber leases. Slightly over half the farm timber sales were covered by formal written contracts. Often the seller, being unfamiliar with legal documents, neglected to read his contract closely or failed to understand the significance of certain phrases. Thus, after signing, he found he had agreed to certain items which were not in accord with his desires. An example of this was the farmer who wished to sell only his pine stumpage. After the contract was signed and the cutting under way, he found that the lease called for all saw timber. Since most of the formal written contracts were for lump-sum sales, without provision for payment for timber cut in excess of the original estimates, the seller had no control over the volume cut. So, if he found he had sold for too low a price, he could not obtain payment for the additional volume. Another source of misunderstanding was the number of cuttings allowable while the contract was in effect. Some sellers maintained that buyers legally violated the intention of their contracts by making a saw-timber cutting as soon as the lease was signed and another for pulpwood just before the lease expired, thereby harvesting trees that had grown to operable size in the intervening time. On a three-year timber lease, the volume increment might be substantial.

The verbal contracts upon which the rest of the sales were made caused equally as much trouble. More than 75 percent of these verbal contracts were founded upon mutual trust, friendship, or a family relationship between buyer and seller. Yet, in over half of these sales the seller expressed dissatisfaction.

In sales with formal written contracts, the sellers seldom complained of buyers not observing the terms of the contract. Under verbal contracts, however, misunderstandings and misinterpretation were common. Many sellers felt that under the terms verbally agreed upon they were not given an accurate accounting of the kind and amount of

timber cut. This was particularly true of those sales paid for by the thousand board feet or by the cord. Without written contracts, there were often complaints about trees cut below a reasonable diameter limit, about the agreed-on price, and about the species to be cut. Unsatisfactory as the present type of written contract may be, it is probably better than no contract at all. At least, it establishes the terms so they can be enforced by both parties. However, it appears that there will continue to be considerable dissatisfaction with timber sale terms and their observance until farmers make general use of an understandable timber lease that is fair to both parties.

Nearly ten percent of the sellers complained of the purchaser's inefficient utilization of timber. In producing veneer bolts, for instance, much of the tree was left on the ground after the choicest portion of the stem had been removed. Since all veneer sales were made by verbal contract, with payment on the basis of the log scale of the bolts removed, there was nothing the sellers could do to enforce closer utilization.

A few sellers felt that cut logs left in the woods by loggers constituted a large item of waste. However, the percentage of logs left was negligible in most cases.

Timber stands were left in what the owners considered an unsatisfactory condition on ten percent of the sales areas. The owner's purpose in making the sale had much to do with his reaction here, for half of the objections were voiced by farmers who had sold timber in order to clear land. In view of the low selling price, the farmers expected the land to be cleared of practically all trees, but this was not economically practicable for the timber operator and was not specified in the sales agreement. A few claims of damage to young growth were heard but not enough to indicate any widespread carelessness. Only one instance of stripping a stand was reported. More complaints of this type were expected owing to the common practice of cutting saw timber to a minimum stump diameter of 8 inches.

ALTERNATIVE METHODS OF MARKETING TIMBER

Occasionally, while discussing a timber transaction with a farmer, it became apparent that some other method of selling would have been more to his advantage. Frequently, too little was known of the character of the timber or of the situation at the time of the sale to form a judgment, but enough cases were observed to permit a few conclusions.

Lump Sum vs. Sales by the Unit

As previously explained, the average sales realization per thousand board feet or per cord was little affected by the terms of sale. However,

it should not be concluded that a lump-sum payment and payment by lumber tally or cord were equally favorable terms for every sale. There was considerable evidence, for example, that lump-sum contracts are risky when the seller is ignorant of the volume and quality of his timber. The lowest prices received in 1947 were from sales made under these conditions. Lacking a cruise of his tract, the farmer's only assurance of receiving fair value is to secure at least two, and preferably three or more, bids before entering a lump-sum agreement. If this cannot be done, it is safer to sell by the thousand board feet or by the cord of products cut. There were enough sales on this basis in most parts of Monroe County last year to establish a "going" price. To find out what it was, a farmer needed only to inquire among his neighbors.

The chief disadvantage of the per-thousand or per-cord sale is the opportunity it gives the buyer to violate either the letter or the spirit of the agreement. If dishonest, he may fail to report the total cut. If in search of a quick profit, he may hi-grade the stand, since he is only forced to pay for what he takes. The farmer's only sure protection is to sell to a man with an established reputation for honesty. In so doing, he often finds himself forced to refuse the high bid for his timber or even to seek out a buyer. Either way, he places himself in an inferior bargaining position, and many such instances were noted in the transactions studied. To avoid this, some farmers sold to the high bidder and depended upon frequent inspections of the logging or milling operations to protect their interests. This was time-consuming at best, and contract infractions were often hard to detect and even harder to prove.

Sales of Primary Products vs. Sales of Standing Timber

It is often recommended that farmers cut their own timber during slack periods and sell it in the form of logs and bolts. These products can then be measured for payment in the presence of both parties to the transaction, and the farmer makes wages for his time. During 1947, only two Monroe County farmers tried this method, selling a total of 225 pens of pulpwood for an average price of \$1.05 per pen or approximately \$5.25 per cord. Since they were able to cut and stack a cord per man-day, this was the equivalent of the average price of pulpwood stumpage, \$1.70 per cord, plus an hourly wage of 44 cents. No cut logs were sold by farmers.

Choice of Markets and Buyers

The fact that box plants paid higher stumpage prices than other buyers has already been mentioned. However, only two of them buy timber in the County. Aside from them, the only large timber buyers are the roofer-lumber manufacturers and the pulpwood producers. The volume of veneer and other stumpage purchased is too small to be significant. Thus, the average farmer really has only two markets: one for pine saw timber

and one for pine pulpwood. To which he sells depends largely on the size of his timber. As a matter of fact, even his choice of potential buyers is limited. The sawmill operators, for example, tend to restrict their activities to one vicinity, and there are seldom more than two or three competing within a given area.

Even though the number of markets and buyers is limited, very few farmers take full advantage of those available. This was illustrated in 1947 by the high proportion of sales to first bidders. Lack of competition among buyers could not be blamed; in most instances, more enterprising neighbors were able to obtain two or more bids for timber of the same desirability.

Sales by the Boundary vs. Sales by Products

Nearly half the sellers whose timber tracts were large enough and well enough stocked to permit separate sales of saw timber and pulpwood were seemingly unaware of the extra income potentialities of doing so. These men usually made one sale of all saw-timber trees 8 inches or larger across the stump. The smaller trees had little value for lumber, because sawmill production has run heavily to 2 x 6 and larger sizes. Consequently, lump-sum bids frequently contained no allowance for the 8- to 9-inch trees, and the tremendous waste in sawing limited the stumpage return when payment was based on lumber tally.

A more profitable alternative was to sell the saw timber to a 10- or 12-inch minimum diameter. The remaining smaller trees and the tops left by the sawlog operation could then be sold for pulpwood. Farmers who followed this procedure usually received as much for trees and tops as was paid for the same volume of pulpwood all in standing timber. Since sawlog cuttings in the limby old-field stands which predominate in Monroe County leave a large volume of waste in tops, the gain through salvaging this material may be substantial.

Heavy vs. Light Cutting

The prevailing practice of selling timber to an 8-inch or smaller minimum diameter on the stump suggests another alternative, that of selling a smaller volume of timber at more frequent intervals. From both an economic and silvicultural standpoint there are many advantages in frequent lighter cuttings. One of the most important is the opportunity to build up the density and quality, and thus the value of the timber stands. At present, however, very few farmers are prepared to sacrifice immediate income in favor of a long-term plan of timber management.

BENEFICIAL FEATURES OF THE PRESENT MARKETING SYSTEM

To convert standing trees in the woods of Monroe County to finished or semi-finished products ready for shipment to outside markets requires a chain of transactions and processes which has been already described. The composite is a marketing system which, although deficient in some respects, has much to recommend it. Some of the advantages are as follows:

Decentralized Market for Timber

Timber buyers, unlike the buyers of many other commodities, are local men. To contact a potential customer for his timber, a farmer need seldom go beyond his immediate neighborhood. There are sawmill operators, for example, in every section of the County. Many are better acquainted with the forest stands of their vicinities than are the men who own them. In some cases, receiving a bid is the landowner's first intimation that his trees have grown to merchantability. The presence of a fairly steady local demand and the fact that neither travel nor correspondence is needed to bring buyer and seller together make timber sales very easy to negotiate. This facility is undoubtedly one of the reasons why a tract containing 30 thousand board feet can be sold for the same price per thousand as one containing 300 thousand. On the other hand, it may help to explain why sizable transactions are entered upon so casually, often without a written contract or without any effort by the seller to encourage competitive bidding.

Assistance to Timber Operators

So many small timber buyers and operators could scarcely exist were it not for advice and financial assistance from lumber concentration yards, from pulpwood dealers, and to a lesser extent from veneer mills and from lumber remanufacturers and wholesalers. Some could never have accumulated sufficient capital for the initial investments in equipment and stumpage, or for the first few weeks' pay rolls and similar expenses. Others would never acquire enough business skill or financial stability to survive competition, unprofitable deals, business recessions, and the like. And only a few could raise the large sums at short notice which would enable them to seize upon attractive buys in timber. Another aid to the small sawmill operator is that lumber is paid for as it is stacked green from the saw. Thus, the sawmill man can keep his limited working capital producing, since little or none of it is tied up in inventories.

Without such support, there would be fewer and larger independent operators to compete for available timber. Such a situation would react against the average farmer by making small timber tracts harder to sell.

The sponsorship of operators by larger firms is not, of course, an unmixed blessing to the timber owner. Along with the assistance, the sponsor is certain to exert some control, and he would be likely to frown on stiff competitive bidding "within the family." Frequently, this control is carried to the point of squeezing out the independents in favor of contract producers.

Marketing System Suited to Character of Timber

The timber of Monroe County is predominately low-grade pine occurring in small scattered stands. Yet, a rather large forest industry has been built on this somewhat shaky base, an industry with products able to compete successfully in the general markets of the Nation. Its design is well fitted to the conditions under which it must operate. Lumbering can serve as an example. To exploit the small scattered stands profitably, the primary manufacturing is carried on in the woods by a large number of highly portable units. Individually, none of these units has sufficient productive capacity or financial strength to move its products beyond local markets. Larger sawmills could reach the general market but, due to lack of portability, would be handicapped by the necessity of hauling low-grade logs to their central locations. Therefore, rough lumber is hauled from the sawmills to a central planing mill for surfacing, grading, and distribution, or to a plant where it is remanufactured into boxes, millwork, or other secondary products. The same principle governs the pulp and paper, veneer, and handle industries. In each case, logs or bolts from a number of primary producers are concentrated at a central plant for further processing and distribution. The efficiency of this system makes possible the present brisk market for farm timber.

THE PRINCIPAL MARKETING PROBLEMS

Some of the more favorable aspects of the present marketing system are due to the presence of a certain degree of organization within the wood-using industries. That this organization sometimes works against the timber owner by reducing competition among buyers or by artificially influencing timber prices is also true. However, a much more serious handicap to farmers is the unbusinesslike way they enter timber lease negotiations. Many conclude a transaction without knowing the volume of timber they are selling or its quality, and by selling to the first bidder they even prevent the chance that the working of the free market will establish a fair price.

Farmers' Lack of Knowledge of Timber Value

The average farmer has little experience in selling timber. Nevertheless, each time he sells he must bargain with men who may buy six or more tracts a year and whose living depends on their skill in appraising timber values. To partially overcome his disadvantage, the farmer knows or can find out what prices are being paid for timber similar to his in the vicinity. If he then obtains a reliable estimate of how much timber he has, he can start negotiating with fair assurance that he won't do too badly. Failure to obtain a volume estimate weakens his bargaining position right at the start by making a lump-sum transaction unsafe. Thus, he either limits the bidders to those willing to pay on the basis of the volume of products removed or blindly gambles that the best lump-sum offer represents fair value. He is totally unable to judge lump-sum and per-thousand or per-cord bids together and select the highest. Yet only about 20 percent of the 1947 sellers had their timber cruised, and it was apparent that some had not even bothered to determine what the current prices were. To protect themselves from excessive losses, a few abandoned all hope of obtaining competitive bids by selling to an operator with a reputation for honesty at his price.

Farmers' Failure to Bargain Effectively

The cases just mentioned were not the only ones in which sellers threw themselves entirely on the buyers' mercy. There were also many less extreme examples of lack of enterprise on the seller's part. In nearly 60 percent of the sales there was only one bidder, and in nearly 45 percent, the buyer set the price. As might be expected, the price was usually low. It was not much higher when the result of haggling between the seller and a single potential buyer, and was only average when set by the seller. By contrast, when two or more bids were received and the sale was made to the high bidder, the price was usually above average. There was evidence that most sellers could have received more than one bid if they had not been so hasty in closing the sale.

Forced Sales

Timber is a fairly stable asset which is ordinarily easy to liquidate. For this reason, farmers often hold it as a reserve to cover an anticipated future need for funds. Thus, a tract may be set aside to pay off a mortgage, to put children through college, or to furnish income in one's old age. Or, it may be considered as a reserve against illness, crop failure, or any other event that might reduce income. The chief disadvantage to these plans is that the timber is not sold when and in such a way that it brings the best price. The occurrence of the need for funds, rather than the condition of the timber market, usually determines the time of selling, and the seller's impatience to complete the transaction works to the buyer's advantage.

Need of money was the motive behind approximately 30 percent of all timber sales in Monroe County in 1947. Timber demand and prices were near the peak, so it was a favorable time to sell. But, apparently, the eagerness of the sellers for a quick turnover made them prone to seize upon the first reasonable offer. Half of them sold on the first bid, and the group as a whole received less than average for its timber.

Tendency toward a Uniform Price

One notable characteristic of forest products marketing in Monroe County is the comparatively narrow range of prices received for saw timber. Seventy percent of the saw timber sales brought from \$8 to \$13 per thousand, and 94 percent fell between \$6 and \$14. To a certain extent this reflects the absence of any large volume of high-grade timber, but timber quality is not nearly so uniform as the prices would indicate. There is a great deal of difference, for example, between the pine of the upland old fields and that of the pine-hardwood forests on the lower slopes. The former is typically short-boled and knotty with rapid taper, while the latter produces two or three fair to good quality logs per tree. Even the two or three sales involving old-growth timber brought but little more than the average price. Yet, there was no evidence of a buyers' conspiracy to fix prices.

There appear to be two explanations of this tendency toward uniformity. The first is the existence of a one-product lumber market in the County. Probably 85 percent of the pine logs are saved into roofers with a flat mill-run value of \$42 to \$46 per thousand board feet. Most of this lumber is disposed of to the concentration yards. There it is surfaced and separated into two grades. The first will be sold in the general lumber market as roofers; the other consists of rejects to be sold locally for rough construction.

The price received by the sawmills for their output is thus based on the general market demand and price for roofers, the local supply of roofer material, and the average yield of roofer-quality lumber at the concentration yard. Some of the larger and more dependable producers enjoy a slight advantage, more or less in the nature of a bonus, but most of the sawmill operators receive the same price. Therefore, the maximum amount they can afford to pay for stumpage should depend largely on their operating efficiency and upon how small a margin they are willing and able to operate. A comparison of the average prices paid by various operators in 1947 seems to indicate that this was indeed the case. In the southwest portion of the County, for example, several of the operators were farmers who employed their regular farm laborers seasonally on sawmill work. With hardly an exception, they paid less for timber than the more efficient full-time lumbermen. The second explanation of the tendency toward uniform prices is the fact that there was competitive bidding in only 40 percent of the sales. In the remaining 60 percent, the seller negotiated with one buyer exclusively until a mutually agreeable price

was set. The price most likely to appeal to both parties would logically be one closely approximating the average of recent sales in the vicinity. Therefore, it seems likely that one sale serves as a precedent for another in many cases until, eventually, more or less of a standard price for non-competitive sales is set.

Poor Market for Hardwoods

Although Monroe County timber is chiefly pine, many farms contain an appreciable volume of hardwoods. In certain areas there is quite a bit of hardwood saw timber--mostly sweetgum and water oaks. Elsewhere, yellow-poplar and sweetgum are a component of pine stands on the better sites. All of the hardwoods were cut to some extent during the war, but there is little market for them at present. On pine logging operations, the better yellow-poplar trees are cut and sawed into roofer lumber along with the pine. And there is, of course, a limited demand for both yellow-poplar and sweetgum trees of veneer quality. However, many farmers complained of their inability to find buyers for their hardwood timber. There were also frequent misunderstandings between sellers and buyers as to whether or not the hardwoods in mixed pine-hardwood stands were to be cut and paid for along with the pine. Due to the repeated culling of these stands for pine alone, the hardwood component is on the increase, and instances of complete conversion to hardwoods are not uncommon.

Improper Cutting Practices

Encouraging an influx of comparatively worthless hardwoods into stands chiefly valuable for pine is only one unfortunate result of present cuttings. Another of equal seriousness can be blamed on overcutting.

Much of the pine timber now grows on land formerly cleared for cotton or other crops. These areas were thinly sown with seeds wind-blown from trees standing along their edges. The seeds had to germinate on soil often already supporting a rank growth of weeds and grasses. For this reason, the resulting stands are usually badly understocked. The prevailing practice of clear-cutting them to a small minimum diameter again leaves them with an inadequate seed source to restock them, so the new stand is no improvement over the original. A system of partial cuttings could reserve some of the smaller but potentially more valuable trees for a later cut as well as enough large trees to assure adequate reseeding of the entire area. Yields would thus be increased in both volume and dollar value.

THE REMEDIES

All the marketing problems disclosed by the Monroe County study are solvable, at least in theory. How quickly and completely they could be solved in practice would depend primarily on the intensity of the effort. The following appear to be the most promising remedies:

Education

One of the greatest handicaps to be overcome is the average farmer's attitude toward his woodland. In the past, this woodland has produced a small income at irregular intervals, and he doubts whether the returns would be sufficiently increased by better forestry and more care in selling to justify the extra effort and expense. To convince him, timber management and marketing information and advice must be easily available and should be backed by practical demonstrations and assistance in his own woods. A small start has already been made. In 1948, for instance, state and federal foresters cooperating under the Norris-Doxey Act assisted southern woodland owners in the sale of over \$3,000,000 worth of forest products. Some states have similar projects of their own as well. Supplementing these programs is the work of the extension services and of paper company and other private foresters. However, all these activities are still on a relatively small scale. Forest extension and farm forestry programs must be greatly expanded before adequate services will be available in every locality.

Fewer Forced Sales

The frequency of forced sales would undoubtedly be reduced as the educational program began to take effect. Farmers would come to recognize timber as a capital asset capable of producing regular income rather than as a reserve to be liquidated at need. The change-over could be speeded by the establishment of a system of forest credits, enabling the farmers to borrow money on their timber. Such a system would also help to promote better farm woodland management practices, for every mortgage would have to require certain minimum standards to protect the collateral.

Improved Marketing Methods

Surveys are needed to provide up-to-date information as to markets available, quality specifications, and prices. In the process, the specifications now in use for various products could be studied to determine their similarities and dissimilarities, as the first step in a long-term project to develop standard grades. There would also be an opportunity to analyze the relative efficiency of current marketing methods and the

possibilities for developing more efficient ones. In other words, surveys of present market outlets and practices would supply information of immediate value to farmers and the public foresters assisting them and, at the same time, would provide the basic data for later studies aimed at developing better and more orderly marketing processes than now exist.

Expanded Markets

As the caliber of farm woodland management improved, so would the quality of the timber offered for sale. This in itself would bring new markets within reach of the farmers. Further expansion of markets would appear to depend on the development of new forest products. The immediate task would be to discover new products and new processes to utilize material for which little or no market exists at present, e.g., low-grade hardwoods, and to develop higher uses for material already in demand, e.g., pine. Related studies would be aimed at increasing the efficiency of existing processes to make wood products manufacturing more profitable and to improve the quality of its products.

More Efficient Manufacture

Another promising field is research in the economics of the forest products industries. One phase might include studies of selling and manufacturing margins and their relation to consumer prices and the prices paid for stumpage. Such studies would reveal inequities or defects in the methods of distributing primary manufactured products that tend to limit raw material margins. Another phase might investigate the most efficient types and sizes of plants and the feasibility of various kinds of integrated production, e.g., plants able to utilize all the species and sizes in mixed timber stands, or plants able to both manufacture and remanufacture.

SUMMARY

Monroe County, Georgia, was selected as a sample county in which to make a case study of current farm timber marketing procedures and problems. Here, detailed information was obtained from the buyers and sellers for all 1947 timber sales. Of 104 completed that year, 82 were of farm timber. They included 80 percent of the saw timber, nearly 50 percent of the veneer timber, and practically all the pulpwood stumpage sold.

The marketing system under which the sales were made has numerous faults from the standpoint of the farm timber owner, but it also has certain advantages. For instance, nearly every farmer can find a buyer in his immediate neighborhood who is willing to buy and operate small tracts. The existence of so many buyers and operators is facilitated by the

concentration yards, pulpwood dealers, box plants, and others who supply advice and financial assistance. Finally, production by many small portable units is generally suited to the character of the timber. The principal defects of the marketing system are (1) a poor market for hardwoods, (2) heavy cutting which keeps forest productivity at a low level, and (3) the tendency for the prices of most sales to be more uniform than the quality of the timber.

Analysis of the prices received in 1947 showed that they varied according to the species composition and the size, quality, and accessibility of the timber. Size of tract and volume per acre, on the other hand, appeared to have no effect. Prices also varied according to the end use. Box manufacturers, for example, paid more for saw-timber stumpage than did the lumbermen. However, the outstanding factor influencing price was the relative bargaining ability of the buyers and sellers, for most timber sales were individually negotiated without benefit of an organized market or an established price. Since the average farmer makes only two or three such sales during his lifetime, he enters these transactions at a serious disadvantage.

In Monroe County, farmers often handicapped themselves further by (1) entering negotiations without knowledge of either the volume or quality of the timber they offered for sale, (2) failing to encourage competitive bidding, and (3) managing their timber, not as an income-producing asset, but as a reserve to be liquidated whenever a need for money arose.

To remedy the conditions in Monroe County which now limit farmers' returns from their timber, the following measures are indicated:

1. Expand forest extension activities and farm forestry programs to make timber management and marketing information and advice generally available to farmers.
2. Studies aimed at developing better and more orderly marketing processes than now exist. As a by-product of its early phases the program could provide the action agencies with the data they need as to markets available, quality specifications, and prices.
3. Develop new markets through forest products research.
4. Increase the efficiency of existing processes to make wood products manufacturing more profitable and improve the quality of its products.
5. Reduce the necessity of forced sales by establishing a system of forest credits.

APPENDIX

PLAN OF STUDY

TYPICAL FORM OF LUMP-SUM TIMBER LEASE

RECOMMENDED FORM OF TIMBER LEASE

PLAN OF STUDY

A county was selected in which the timber types and timber quality, the methods of selling farm timber, and the products produced from farm timber were believed to be representative of a broad surrounding area. Within this county, case studies of individual sales of standing timber and other forest products were made. The aim was to trace all transactions which were completed during the most recent calendar year, 1947 in this case. By interviewing the buyer and seller in each sale the following information was collected and verified wherever possible: the volume of forest products which changed hands in terms of the footage of lumber sawed, the scale of logs removed, etc.; the total sales price; a description of the timber or other products sold; the conditions leading to the decision to sell or buy; how the negotiations were started and concluded; the terms of sale; the degree of utilization; the primary products manufactured and their disposition; and the satisfaction or dissatisfaction of the two parties with the outcome of the transaction. Notes were also taken as to possible alternative methods of sale and why they were not adopted. It was hoped that analysis of the case studies would disclose the principal factors tending to limit the sellers' returns, the relative importance of those factors, why they exist, and whether or not they are susceptible to correction. The primary interest was in farm sales, but the same information was obtained for sellers other than farmers to afford a comparison.

The analysis consisted of separating the data into groups of like products and testing each group for possible relationships between sales realization and the physical or economic circumstances of the sale. Needless to say, it is extremely difficult to draw any exact conclusions from case study data gained entirely through interviews and involving so many variables. The interview method is always subject to bias and affords no precise evaluation of such factors as timber quality, while inter-correlations among the variables tend to obscure the true relationships. To partially overcome the last objection, it was sometimes possible to analyze the variables in pairs, varying one while holding the other constant. The field methods employed did not seem sufficiently refined or systematic to warrant a detailed statistical analysis. However, future case studies could be designed with this in mind.

TYPICAL FORM OF LUMP-SUM TIMBER LEASE

State of Georgia, Monroe County

This indenture, made the _____ day of _____ between _____, party of the first part, and _____, party of the second part,

Witnesseth: That the said party of the first part, in consideration of the sum of \$_____, cash in hand paid, the receipt of which is acknowledged, has bargained, sold, aliened and conveyed, and by these presents does bargain, sell, alien and convey, unto the said party of the second part, heirs, successors and assigns, all of the following described property, rights and privileges:

All of the saw timber and trees that will measure eight inches and over across the stump, twelve inches from the ground, at the time of cutting, standing, growing or being on the following described lands:

All that tract or parcel of land

The grantor reserves from the above described land a tract

Said party of the second part shall have the right to use and occupy areas on said land convenient for the cutting, logging, processing and removal of said timber and trees, and for the location of train ways, roads, mill locations, and sites for stacking and storing lumber and other products from said trees and timber; to the use of water on said land; to erect and later remove such buildings as may be convenient for the purposes of this contract; to use said timber and trees for any purpose desired; the right to ingress and egress and to enter upon said land with such men, vehicles and machinery as may be desired; and to do such other things as are usual and customary in a contract of this kind. No damage shall be done to growing crops or fences without just compensation therefor. All the property, rights and privileges herein mentioned and conferred shall be assignable. The words "party of the first part" shall include all parties signing this contract, and they shall represent and warrant they are sui juris; and the words "party of the second part" shall include all of the grantees, lessees and purchasers herein.

The said party of the second part shall have the same for the term of _____ years from _____ in which to exercise all the rights and privileges herein mentioned, without additional charge; and for such additional time, not exceeding _____ years, as may be desired, upon the payment to the party of the first part, heirs, successors or assigns, of the sum of _____ dollars, per year, for each additional year so used, to be paid at the beginning of such additional year. The limitation of time shall be tolled during any litigation involving the premises or a title situation as may involve party of the second part in litigation through no fault of said party.

To have and to hold the said bargained property, rights and privileges unto the said party of the second part, heirs, successors and assigns, in fee simple. And the said party of the first part, for himself, heirs, successors and assigns, unto the party of the second part, heirs, successors and assigns, shall and will and does warrant and defend the title to the property, rights and privileges herein given against the lawful claims of all persons.

Witness the hand and seal of each of the first parties hereto, and the delivery of these presents, the day and year first above written.

(Seal)

Signed, sealed, and delivered in the presence of:

(Witness)

(Notary)

RECOMMENDED FORM OF TIMBER LEASE^{1/}

_____, of _____,
 (I or we) (Name of Purchaser) (Post Office) (State)
 hereinafter called the purchaser, agree to purchase from _____, of
 _____, hereinafter called the seller, the
 (Post Office) (State)
 designated trees from the area described below.

I. Description of Sale Area:

(Describe by legal subdivisions, if surveyed, and approximate, if not)

II. Trees designated for cutting: (Cross out A or B -- use only one clause)

- A. All _____ trees marked by the seller, or his agent, with paint spots below
 (Species)
 stump height; also dead trees of the same species which are merchantable for
 _____.
 (Kind of forest products)
- B. All _____ trees merchantable for _____ which meas-
 (Species) (Kind of forest products)
 ure _____ inches or more outside the bark at a point not less than 6 inches above the
 ground; also other _____ trees marked with paint spots below stump height by the
 (Species)
 seller or his agent.

III. Conditions of sale:

- A. The purchaser agrees to the following:
1. To pay the seller the sum of \$_____ for the above-described trees and to make payments in advance of cutting in amounts of at least \$_____ each.
 2. To waive all claim to the above-described trees unless they are cut and removed on or before _____.
 (Date)
 3. To do all in his power to prevent and suppress forest fires on or threatening the Sale Area.
 4. To protect from unnecessary injury young growth and other trees not designated for cutting.
 5. To pay the seller for undesignated trees cut or injured through carelessness at the rate of \$_____ each for trees measuring 10 to _____ inches in diameter at stump height and \$_____ each for trees _____ inches or over in diameter.
 6. To repair damage caused by logging to ditches, fences, bridges, roads, trails, or other improvements damaged beyond ordinary wear and tear.
 7. Not to assign this agreement in whole or in part without the written consent of the seller.
- B. The seller agrees to the following:
1. To guarantee title to the forest products covered by this agreement and to defend it against all claims at his expense.
 2. To allow the purchaser to use unmerchantable material from tops of trees cut or from trees of _____ species for necessary logging improvement free of charge, provided such improvements are left in place by the purchaser.
 3. To grant the freedom of entry and right-of-way to the purchaser and his employees on and across the area covered by this agreement and also other privileges usually extended to purchasers of stumpage which are not specifically covered, provided they do not conflict with specific provisions of this agreement.
- C. In case of dispute over the terms of this agreement we agree to accept the decision of an arbitration board of three selected persons as final. Each of the contracting parties will select one person and the two selected will select a third to form this board.

Signed in duplicate this _____ day of _____ 194 ____.

 (Purchaser)

 (Witnesses)

 (Seller)

 (Witnesses)

^{1/} From "Managing the Small Forest," USDA Farmers' Bulletin No. 1989, May 1947.

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